



Atty. Dkt. G-81 (CPA of G-31)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Serial No. : 09/101,049

Confrm. No. : 9220

Filing Date : June 26, 1998

GAU : 2814

Examiner : Mr. D. Graybill

For : Contactless Electronic Module For A
Card Or Label

AMENDMENT C

DEC 20 2001

This is in response to the August 28, 2001 Office
Action (Paper No. 15).

Please amend:

IN THE CLAIMS:

In accordance with Rule 37 C.F.R. §1.121, there is attached at the foot of this amendment a copy of the amended claims showing the changes made in those claims from the ones previously on file.

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Claim 27 (Amended). An electronic label having dimensions such that it may be mounted in a well in an integrated circuit chip card of ISO 7810 standard mechanical dimensions, comprising an electronic module having a substrate (10) with a major plane surface; a spiral antenna (2) mounted on said substrate and having a plurality of turns parallel to the major plane surface, and having an outer size in the region of 5 to 15mm; and an electronic micro circuit (7) connected to said antenna, said label having a height dimension less than 0.76mm whereby said label may be mounted if desired within a well in an ISO 7810 standard mechanical dimension integrated circuit chip card.

C /
Cont

Claim 28 (Amended). An electronic label such that it may be mounted in a well in an integrated circuit chip card of ISO 7810 standard mechanical dimensions, comprising an electronic module having a substrate (10) with a major plane surface; an antenna (2) mounted on top of said substrate and having a plurality of turns parallel to the substrate major plane surface; an electronic micro circuit (7) insulatively mounted on top of and electrically connected to said antenna; said electrically connected antenna and microcircuit comprising connection terminals (11,12) of the antenna and contact pads (13,14) of the electronic microcircuit (7) connected via leads (15), said label having a height dimension less than 0.76mm whereby said label may be mounted if desired within a well in an ISO 7810 standard mechanical dimension integrated circuit chip card.

(r.1)
Concl^d

Claim 29 (Amended). An electronic label such that it may be mounted in a well in an integrated circuit chip card of ISO 7810 standard mechanical dimensions, comprising an electronic module (6) having a substrate (10) with a major plane surface, an antenna (2) and an electronic microcircuit (7), said microcircuit (7) being connected to the antenna (2) to enable contactless operation of the module (6), the whole of the antenna (2) being arranged on the substrate and comprising turns made in the plane of the substrate (1), said microcircuit antenna connection including said antenna having connection terminals (11,12) being electrically connected to corresponding, respective contact pads (13,14) of the microcircuit, a tuning capacitor (17) being connected in parallel to the terminals (11,12) of the antenna to the contact pads (13,14) of the electronic microcircuit (7), the value of the capacitor (17) being chosen to obtain an operating frequency for module (6) in the range of approximately 1 Mhz to 450 Mhz, said label having a height dimension less than 0.76mm whereby said label may be mounted if desired within a well in an ISO 7810 standard mechanical dimension integrated circuit chip card.

Claims 30, 31, 47 and 48 cancel without prejudice
subject to applicant's rights under 35 U.S.C.

Add the following new claims 49-51.

add c

Claim 49. The label according to claim 27, wherein
said substrate comprises an electronic chip card ^{of} ISO 7810 ^{RP} *inventor*
mechanical size with a well on one major plain surface
thereof, and said antenna and microcircuit being positioned
in said well below said major plane surface.

Claim 50. The label according to claim 27, wherein
said substrate comprises an electronic chip card ^{of} ISO 7810 ^{RP} *inventor*
mechanical size with a well on one major plain surface
thereof, and said antenna and microcircuit being positioned
in said well below said major plane surface.

Claim 51. The label according to claim 27, wherein
said substrate comprises an electronic chip card ^{of} ISO 7810 ^{RP} *inventor*
mechanical size with a well on one major plain surface
thereof, and said antenna and microcircuit being positioned
in said well below said major plane surface.

REMARKS

After amendment there are claims 27-29, 32-46 and 49-51. Claims 27, 28, and 29 are independent claims having dependent claims 32-36 and 49, 37-40 and 50, and 42-46 and 51, respectively. Independent process claims 30 and 31 and their dependent claims 47 and 48 have been cancelled pursuant to the restriction requirement in the Office letter, and subject to applicant's rights under 35 U.S.C.

Claims 27, 28 and 29 have been amended herein. Support for these claims is in claim 30, and in the specification, for example, page 2, lines 27-29, and particularly line 29 for the 0.76 mm thickness, fig. 2 and its description at pages 14, line 13, through page 15, line 25, and claims 16, 17, and 18 as originally filed; and throughout the specification.

There are several formal matters in the Office letter and applicant's attorney would like to address those first and then go to the rejection on prior art.

In the Office letter on page 4, ¶1, there is a requirement for a drawing. There are several figures in the application and it is respectfully submitted that the claimed features are shown in the drawings. It is respectfully requested that the drawing requirement should be withdrawn. If maintained, would the Office please

identify what additional elements are required to be shown in the drawings that are not shown in the figures presently submitted.

In the Office letter on page 4, ¶2, claim 28 is objected to. The point is well-taken and the claim has been appropriately amended.

Beginning in the next ¶ and continuing on to page 6, line 5, objection is made to the phrase "in the region of." This phrase appears in the several claims listed in the Office and also in the detailed description of the specification, for example, at page 9, line 22, and at page 10, line 3. Reference is also made to page 11, lines 8 and 9, and further at lines 12 and 15, and at other locations in the specification. The meaning of this phrase is "in the range of" or "approximately." Reconsideration is requested. However, if the Office repeats the objection, applicant's attorney would like to have an opportunity to replace a suitable, non-offending phrase.

At page 5, last two ¶s, concerning claims 42 and 43, the examiner's point is indeed well-taken. The stammer in the claim will be deleted at such time as at least one claim is found allowable.

Turning now to the Office letter at page 6, beginning of the second full ¶, all claims stand rejected on a

combination of references. The rejection is respectfully traversed.

An aspect of applicant's invention relates to portable objects such as, in particular, contactless electronic labels and electronic chip cards. It relates to a portable object of ISO format such as the contactless chip card. In the prior art, such a portable object is composed of a module comprising a microcircuit and a carrier, having other electronic components and where the module is integrated into the card itself. The thickness of such cards is less than 1mm. An aspect of applicant's invention is in mounting and connecting electronic components, e.g., antenna (2) and capacitor (17) directly on the module. It may be noted that this module fits inside a well in an electronic chip card.

The primary reference Jordon, Ref. B, 5,423,344, seems to disclose the use of a TAG 180 comprising a carrier substrate 182 with a microcircuit 194, antenna turns 188, and a capacitor 184. The total dimensions represent a thickness of less than 2.5mm and a diameter less than 20mm (Col. 19, lines 62-68). This TAG is not the same nor in the same category as applicant's module because the prior art dimensions indicate that it could not be considered being used within the chip card technology. The prior art TAG does not fit within the height of the ISO standard format chip card. The prior art TAG is obviously not an electronic

module made for positioning within a well in an ISO standard dimension card.

Jordon, for an additional reason, does not show or suggest applicant's claimed invention. That patent in fig. 4 seems to have another embodiment of its invention very far from applicant's. Obviously, Jordon discloses some electronic components, but concerns a completely different technical field and application. Jordon's device is mechanically different and cannot be used in the electronic chip card application, nor is there any suggestion to change it to do so.

At page 9, there is a rejection to independent claims 27 and 28 and several dependent claims on Matsuzaki, Ref. A, 5,604,383. It is respectfully submitted that this patent is irrelevant to the technical field of applicant's invention, because it concerns a power supply device. The teaching here cannot help making an electronic chip card having a contactless electronic module.

Applicant's invention is now claimed as an electronic module that is new and not obvious over the prior art. As pointed out in the introduction to the specification, the prior art techniques for modules for use in electronic chip cards are different from the devices taught by applicant's invention. The prior art does not show or suggest what applicant presently claims.

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In view of the above remarks, favorable action and a
Notice of Allowance is courteously solicited.

Respectfully submitted,

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In accordance with Rule 37 C.F.R. §1.121, here is a copy of claims 27, 28 and 29 showing the changes from those claims previously on file.

Claim 27 (Amended). An electronic label having dimensions such that it may be mounted in a well in an integrated circuit chip card of ISO 7810 standard mechanical dimensions, comprising an electronic module having a substrate (10) with a major plane surface; a spiral antenna (2) mounted on said substrate and having a plurality of turns parallel to the major plane surface, and having an outer size in the region of 5 to 15mm; and an electronic micro circuit (7) connected to said antenna, said label having a height dimension less than 0.76mm whereby said label may be mounted if desired within a well in an ISO 7810 standard mechanical dimension integrated circuit chip card.

Claim 28 (Amended). An electronic label such that it may be mounted in a well in an integrated circuit chip card of ISO 7810 standard mechanical dimensions, comprising an electronic module having a substrate (10) with a major plane surface; an antenna (2) mounted on top of said substrate and having a plurality of turns parallel to the substrate major plane surface; an electronic micro circuit (7) insulatively mounted on top of and electrically connected to said antenna[.]; said electrically connected antenna and microcircuit comprising connection terminals (11,12) of the antenna and contact pads (13,14) of the electronic microcircuit (7) connected via leads (15), said label having a height dimension less than 0.76mm whereby said label may be mounted if desired within a well in an ISO 7810 standard mechanical dimension integrated circuit chip card.

Claim 29 (Amended). An electronic label such that it may be mounted in a well in an integrated circuit chip card of ISO 7810 standard mechanical dimensions, comprising an electronic module (6) having a substrate (10) with a major plane surface, an antenna (2) and an electronic microcircuit (7), said microcircuit (7) being connected to the antenna (2) to enable contactless operation of the module (6), the whole of the antenna (2) being arranged on the substrate and comprising turns made in the plane of the substrate (1), said microcircuit antenna connection including said antenna having connection terminals (11,12) being electrically connected to corresponding, respective contact pads (13,14) of the microcircuit, a tuning capacitor (17) being connected in parallel to the terminals (11,12) of the antenna to the contact pads (13,14) of the electronic microcircuit (7), the value of the capacitor (17) being chosen to obtain an operating frequency for module (6) in the range of approximately 1 Mhz to 450 Mhz, said label having a height dimension less than 0.76mm whereby said label may be mounted if desired within a well in an ISO 7810 standard mechanical dimension integrated circuit chip card.